

Remarks

1) Claims 1-29 were filed in the case. By the Office Action mailed May 7, 2001, the Examiner has rejected all of claims 1-29. A number of formal rejections were made under 35 U.S.C. 112, to which response is made hereinbelow. In addition, in the Examiner's view:

Claims 1, 2, 13, 19, 20 and 24 were rejected under 35 USC 102 as being anticipated by U.S. Patent 5,782,187 of Black, Jr.

Claims 1,2, 3, 5, 6 and 7 were rejected under 35 USC 102 as being anticipated by U.S. Patent 3,003,167 of Smith.

Claims 3 – 12, 14 – 18, 21 – 23, and 25 to 29 were rejected as being obvious under 35 USC 103 in light of various combinations of US Patent references 4,721,426 of Bell; 3,195,478 of Thompson; or 5,826,517 of Larsen with either Black Jr., or Smith, above.

3) **35 USC 112 – Formal Objections**

Claim 3

The Examiner has requested the word 'the' be added before "vehicles" at line 6 of claim 3. This has been done, and "vehicles" has been amended to the singular "vehicle".

Claim 4

The Examiner has objected to the wording "the set of fittings" as lacking proper antecedent basis. The applicant respectfully traverses the Examiner's rejection. The wording used by the applicant in claim 4 has the classic form of a *Markush* claim sanctioned by the USPTO. (*Ex parte Markush* [1925] C. D. 126; O.G. 839). Claim 4 has been amended to substitute "and" for "or" in accord with *Markush* language.

Similarly, the Examiner's objections under 35 USC 112 concerning the collar and the pivot pin do not appear to be properly made since one integer of a set in a *Markush* claim, by definition, does not provide antecedent basis for any other integer in the set. In that light, the applicant submits that the Examiner's rejection on this ground is inconsistent with the long accepted practice of the U.S.P.T.O.

Claim 13

The Examiner has requested that the word "the" appear before the second and subsequent uses of the word "vehicles". This amendment has been incorporated. Other amendments to Claim 13 are discussed below.

The applicant respectfully traverses the other rejections of claim 13 made by the Examiner under 35 U.S.C. 112. Claim 13 is a claim to the sub-combination of a bridge plate. It is neither a claim to a railroad car, nor to a combination of rail road cars.

In that connection, the grammar of the claim has been amended to clarify that none of the features of one rail road car or another is a positively recited element of the claim. The rail road cars are noted in the preamble of the claim to provide environment. Subsequent reference in the claim to the environmental objects of the preamble is permitted, and desirable, for giving greater understanding of the context of the invention, without incorporating the environment into the claim in such a manner as to convert a sub-combination claim into a combination claim. Such reference has been accepted U.S.P.T.O. practice since at least as long ago as *In re Rohrbacher and Kolbe* (128 U.S.P.Q. (BNA) 117 (C.C.P.A. 1960)) and *In re Dean* (130 U.S.P.Q. (BNA) 107 (C.C.P.A. 1961)). As such the applicant respectfully submits that any rejection under 35 USC 112 has been overcome.

The applicant further submits that the same considerations apply to the Examiner's comments on combinations and sub-combinations with respect to claims 20 and 24.

Claim 20

Claim 20 is a claim to a sub-combination, namely to the bridge plate. It is not a claim to a rail road car. The applicant repeats the commentary made above in connection with claims 13 concerning combinations and sub-combinations. The Examiner has questioned the phrase "said second fitting including a linear extension member". The slot itself defines a "linear extension member", as indicated in the disclosure at page 20, lines 27 - 30.

Claim 24

Claim 24 is a claim to a sub-combination, namely to the bridge plate. It is not a claim to a rail road car. The applicant repeats the commentary made above in connection with claims 13 concerning combinations and sub-combinations.

Claim 29

The Examiner has noted a typographical error in the claim. In that regard "tow" has been deleted and "two" has been inserted in the claim as suggested by the Examiner.

2) Rejections Under 35 U.S.C. 102 - Anticipation

(i) Test for Anticipation

Anticipation can only be established by a single prior art reference which discloses each and every element of the claimed invention. *Structural Rubber Products Co., v. Park Rubber Co.*, 749 F.2d 7070; 223 U.S.P.Q. 1264 (C.A.F.C. 1984). The test for anticipation requires that all of the claimed elements must be found in exactly the same situation and united in the same way to perform the same function in a single unit of the prior art. *Studiengesellschaft Kohle, m.b.H. v. Dart Industries., Inc.*, 762 F.2d 724, 726, 220 U.S.P.Q. 841 at 842 (C.A.F.C. 1984). Anticipation cannot be predicated on teachings in a reference that are vague or based on conjecture. *Datascope Corp. v. SMEC Inc.*, 594 F. Supp. 1036; 224 U.S.P.Q. 694, 698 (D.N.J. 1984).

(ii) U.S. Patent 5,782,187 of Black Jr.

The example cited by the Examiner in Black Jr., shows permanently mounted bridge plates located between two car units of an articulated rail road car. This is not the same as the present invention at all. The presently claimed invention relates to a bridge plate for use at the coupled end of a rail road car, to span the gap between vehicle decks at the couplers. As explained in the background of the invention at page 4, lines 21 – 34, the internal bridge plates mounted at a permanent articulated connector of an articulated rail road car face quite different design criteria and operating requirements than bridge plates at the coupler ends.

In this regard, the applicant specifically notes that the Examiner's description in the Examiner's report mailed May 7, 2001 is incorrect in stating that Black Jr., shows "... a beam 32 of sufficient length to span a gap between a pair of adjacent railroad cars (22a, 22b), ..." Items 22a and 22b are not adjacent rail road cars. On the contrary, car units 22a and 22b are units of a single articulated rail road car, 22 as plainly indicated by Black Jr., at, for example, col. 2, lines 10 – 12.

In the context of claim 13, this fundamental conceptual difference is emphasised not only by the intended use between two releasably coupled rail road cars, but further by indicating

that one of the fittings is disengageable. Clearly, the Black Jr., bridge plate is not intended to be disengageable, but appears to be intended as a permanent element of the car. That is, not only is plate 32 retained by items 102a and 102b, (see Figure 8) but the entire plate is sandwiched between the permanently mounted movable platforms 30a (or 30b) and the underlying structure of the body of the car unit, be it 22a or 22b (See Figure 2). It is not surprising that plates 32 should be permanent – they are located at the permanent connection at the articulated connector. As such the elements of Black Jr., are not “found in exactly the same situation and united in the same way to perform the same function in a single unit of the prior art.”

Similarly, in the context of claim 24, again, Black’s bridge plates are not used at the coupler ends of the car. As such, the Black does not have a disengageable pivot pin, but rather connections that appear to be intended to be permanent mountings.

(iii) U.S. Patent 3,003,167 of Smith

Smith shows a spanning element, 5. Smith states, at col. 1, lines 1 – 29:

“This invention relates to bridging structures. More particularly, it is concerned with bridging structures of a kind in which a spanning element permanently connected to a platform is movable from a normally retracted position on the platform to span an interval between said platform and another platform either of a mobile or stationary type.”

“The chief aim of my invention is to provide a simple and inexpensive bridging structure of the kind referred to, wherein the spanning element is easily and quickly extended from its normal retracted position on the one platform into bridging relation with the other platform, and simultaneously upwardly tilted and finally lowered to bridging position.”

“In connection with a bridging structure having the above mentioned attributes, it is a further aim of my invention to provide simple stop and locking means by which the spanning element is securable against accidental displacement in either its normally retracted position, or in its extended position bridging the interval between the two platforms.”

(iv) Smith and Claims 3, 5, 6 and 7

There is no indication that Smith was concerned with the problem of providing a bridge plate for spanning the gap between two adjacently coupled rail road cars while leaving the spanning member (i.e., a bridge plate) in position with the train moving. That is, there is no

indication that Smith was concerned about providing fittings that would permit yawing motion of the bridge plate relative to either of the adjacent rail road cars.

Smith's structure would seem to suggest the contrary. In viewing Smith's Figure 11, the relationship of roller 31 and portion 12c of cam 12 would appear to work to discourage accommodation of yawing motion, as would the illustrated placement of locking pin 26.

(v) Anticipation – Summary

In summary, it is believed that none of the pending claims as presently amended is anticipated by either Black Jr. or Smith.

3) 35 U.S.C. 103 - Obviousness

The Examiner has rejected all of claims 3 – 29 as being obvious under 35 USC 103. The applicant respectfully traverses all such rejections of each of claims 3 – 29.

(a) MPEP Section 2143.01

According to the MPEP, section 2143.01, the Examiner must establish three basic criteria to form a *prima facie* rejection based on obviousness. First, there must be some suggestion or motivation, either in the knowledge generally available or to one of ordinary skill in the art to modify the reference or to combine the reference teachings. Second, there must be some reasonable expectation of success. Third, the prior art reference (or references when combined) must teach or suggest all the claimed limitations.

(b) *In re Fine*, 837 F.2d 1071, 350, 5 USPQ 2d 1596 (C.A.F.C. 1992) states:

“The PTO has the burden under section 103 to establish a *prima facie* case of obviousness. *See In re Piasecki*, 745 F 2d 1468, 1471-72, 223 USPQ 785 (Fed. Cir. 1984) It can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. *In re Lalu*, 747 F.2d 703, 705; 223 USPQ 1257, 1258 (Fed. Cir. 1984) ... [Other references omitted] ... This it has not done. The Board points to nothing in the cited references, either alone or in combination, suggesting or teaching Fine's invention.”

And further:

"Obviousness is tested by "what the combined teachings of the references would have suggested to those of ordinary skill in the art". *In re Keller*, 642 F.2d 413; 208 USPQ 871 (CCPA 1981). But it "cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination". *ACS Hosp. Sys.*, 732 F.2d at 1577, 221 USPQ at 933. And "teachings of references can be combined only if there is some suggestion or incentive to do so." *Id.* Here, the prior art contains none."

(c) Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention *absent some teaching, suggestion or incentive* supporting the combination *ACS Hospital Systems Inc. v. Montefiore Hospital*, 732 F. 2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir.).

Cited in *In re Geiger*, 815 F.2d at 688, 2 USPQ 2d at 1268 (Fed. Cir. 1987) (Emphasis added).

(d) *In re Gordon: Destruction of Function*

A s. 103 rejection based upon a modification of a reference that destroys the intent, purpose, or function of the invention disclosed in the reference, or references, cited by the Examiner is not proper and the prima facie case of obviousness cannot be made, because there would be no technological motivation for engaging in such a modification or change. To the contrary, there would be a disincentive. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

(e) Combining References, and Persons "Skilled in the Art"

The applicant respectfully traverses rejections based on combinations of references, or based on what is suggested to be knowledge of persons of ordinary skill in the art. The MPEP requires that the Examiner provide an objective source to support a contention that a feature is known or obvious to one skilled in the art. An unsupported statement that a feature or combination "would have been obvious to one skilled in the art" is improper if made without support. *In re Garrett* 33 BNA PTCJ 43 (November 13, 1986).

MPEP 2143.01 reads, in part, as follows:

FACT THAT THE CLAIMED INVENTION IS WITHIN THE CAPABILITIES OF ONE SKILLED IN THE ART IS NOT SUFFICIENT BY ITSELF TO ESTABLISH PRIMA FACIE OBVIOUSNESS

A statement that modifications of the prior art to meet the claimed invention would have been "well within the ordinary skill of the art at the time the claimed invention was made because references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ 2d 1300 (Bd. Pat. App. & Inter. 1993). See also *Al-site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 50 USPQ 2d 1161 (Fed. Cir. 1999) (The level of skill in the art cannot be relied upon to provide suggestion to combine references).

4. Prima Facie Obviousness Not Made Out

(a) Combination of Black Jr., and Smith References

The Examiner has suggested the combination of these references in connection with claims 4, 9, 10, 12, 14, 15, and 26 – 29.

(i) No suggestion or motivation for combination given

The Examiner has not provided any indication that either of these references provides a motivation or suggestion leading to their combination. As such, the applicant submits that a *prima facie* ground for rejection of these claims on the basis the combination of the references, has not been made out under 35 U.S.C. 103.

(ii) Combination Destroys Function

In the Black Jr., reference the mounting is permanent. There is no suggestion, for example, that the Black Jr., internal bridge plates are either (a) movable to a cross-wise storage position, let alone that such a position should be their "normal" position as described by Smith; or (b) that Black Jr., is referring to bridge plates suitable for use at the coupler ends; or (c) that the Black Jr., plates are not in a permanently mounted condition, such that they would not be movable between cross-wise and lengthwise orientations. In any case, to combine the references would then destroy the very function achieved by the invention claimed by Smith.

Alternatively, looked at in the other direction, the Examiner has not suggested any motivation whereby a person skilled in the art would choose to locate Smith's pivoting bridge plates at the internal articulated connector in an articulated rail road car, as in Black Jr. Such a choice would be odd indeed – bridge plates at articulated connectors generally stay in place in operation, since there is usually no need for them to be lifted or placed in a storage position

while the train is rolling. Moving internal bridge plates to a storage position during travel would only serve to make unnecessary work for train crews, something which the present inventors have sought to avoid, as indicated in the background of the invention from page 3, line 23, to page 4, line 9. The applicant respectfully submits that very few persons skilled in the art, if any, would be led to combine references in such a way as to make needless work for themselves.

(iii) Concerning Claim 19 and Black Jr.

The Examiner has indicated that Black Jr., has a beam with a low friction plastic pad. The applicant notes that the internal bridge plate 32 does not have such a pad. The pad in Black Jr., is mounted to the adjacent platform 30a (or 30b) that rides upon plate 32, and is, in that sense, the opposite of what is claimed in claim 19.

(iv) Summary Concerning Black Jr., and Smith

In summary, the applicant submits that (a) the Examiner has not demonstrated a suggestion or motivation in the art that would lead one skilled in the art to make the proposed combination; and (b) the proposed combination would at best be recognised by a person skilled in the art as impractical, and at worst would destroy the invention claimed by Smith. The applicant submits that either ground alone would be sufficient to demonstrate that *prima facie* obviousness of the presently claimed inventions under 35 USC 103 has not been shown with regard to the proposed combination of Black Jr. , and Smith in connection with any of claims 1 – 29.

(b) Black Jr., or Smith and US Patent 4,721,426 of Bell
and US Patent 3,195,478 of Thompson

The Examiner has further suggested the combination of Black Jr., and Smith, or either of them, with both the Bell and Thompson references to establish a rejection under 35 USC 103 of claims 3, 4, 6 - 10, 12 - 18, 21 – 23, and 25 – 29.

(i) US Patent 4,721,426 of Bell

Bell shows a conventional bridge plate that is movable between raised and lowered positions by pivotal motion about a horizontal hinge axis. Bell does not have fittings that permit storage in a sideways orientation. Bell does not have fittings that accommodate yaw between

the bridge plate and the railroad car. Bell does not have fittings that permit pivotal motion about a predominantly vertical axis.

(ii) US Patent 3,195,478 of Thompson

Thompson shows a bridge plate that is movable between raised and lowered positions about a horizontal axis. Thompson does not have fittings that permit storage in a sideways orientation. Thompson does not have fittings that accommodate yaw between the bridge plate and the railroad car. Thompson does not have fittings that permit pivotal motion about a predominantly vertical axis.

(iii) No Suggestion or Motivation to Combine

As noted above, the Examiner bears the burden of demonstrating a suggestion or motivation in the art to combine the cited references. There is no indication in the Examiner's letter identifying references in any of the cited patents that would lead to (a) their combination; or (b) a further combination with either Smith, or Black Jr., or both. As such the applicant respectfully submits that the Examiner has not met the requirements for establishing a *prima facie* case of obviousness under 35 USC 103.

(iv) Combination Would Destroy Function of Smith

The combination suggested by the Examiner, of combining either Bell or Thompson with Smith would then prevent Smith from pivoting in the yaw direction (i.e., about a vertical axis) since both Bell and Thompson pivot about horizontal axes. Both Bell and Thompson are moved by raising and lowering, with the disadvantages noted by the applicant in the background of the invention.

Further, there is no suggestion in either Bell or Thompson (or Smith, for that matter) that the bridge plates may remain in the lowered position during train operation – quite possibly because neither reference appears to have an allowance for slack run-in or run-out.

(v) Combination With Black Jr.

Given that Black Jr., is apparently permanently sandwiched between other structure both above and below, it would appear that raising plates 32 of Black Jr., by pivotal motion about a horizontal axis, as in Bell or Thompson, would be (a) counter intuitive for internal bridge plates, as discussed above; and (b) apparently not possible given the Black Jr.,

structure. Alternatively, were the Black Jr., structure to be employed by Bell or Thompson, then the fundamental function of their bridge plates, namely the ability to be raised and lowered by pivotal motion about a horizontal axis, would appear to be destroyed.

(vi) Summary Regarding Bell and Thompson, and Smith or Black Jr.

The applicant submits that, as in *In re Gordon*, supra, a person skilled in the art would not readily be led to make a combination that would destroy the basic function of either one, or both, of the references cited by the Examiner. As such the applicant submits that, even if the burden of establishing a suggestion or motivation for combining Bell and Thompson had been met, the Examiner has not met the burden of *In re Fine*, and has not established *prima facie* grounds for a rejection under 35 USC 103.

(c) US Patent 5,826,517 of Larson and (1) Black Jr., and
(2) US Patent 4,721,426 of Bell and
(3) US Patent 3,195,478 of Thompson

(i) Preliminary Commentary: No Motivation or Suggestion to Combine

The Examiner's rejections of claims 11 and 16 require a combination of neither merely two references, nor merely three references, but no less than four separate references, namely Larsen, Bell, Thompson, and Black Jr.

As noted above, the Examiner bears the burden of showing that there is a suggestion or motivation in the art for the proposed combination of references. The applicant respectfully submits that not only is there no showing of suggestion or motivation to combine demonstrated in the Office Action of May 7, 2001 for the combination of these four references, there is no such reference to suggestion or motivation for the combination of any three of them, nor indeed of any two of them for the reasons given above.

(ii) US Patent 5,826,517 of Larson

Larson shows a "Bogie Coupling System for Convertible Railway-Railroad Vehicle". The Examiner points to Figure 5 as showing a bifurcated toe, and suggests the modification of Bell to include the bifurcated toe "... in order to reduce stress concentration at the end of the bridge plate thereby increasing the service life of the bridge plate."

Notably, Larson does not show a bridge plate, and, indeed does not show any kind of rail road car having a deck for carrying vehicles, let alone two such cars coupled together with bridge plates therebetween. The bifurcated element to which the Examiner refers is a structural member for engaging the kingpin of a highway trailer so that it can be supported on a bogie. There is no mention, suggestion, illustration or description in Larson of anything having to do with bridge plates, with bridge plates that are capable of tolerating yawing motion of the coupler ends of rail road cars, or bridge plates that are movable between longitudinal or cross-wise orientations, of bridge plates that can be raised or lowered, of bridge plates that have flanges and webs, or any such other thing even vaguely related to bridge plates.

As stated above, the Examiner has not pointed to any suggestion or motivation in the art that would lead a person skilled in the art to combine these references to arrive at the claimed invention. The applicant respectfully submits that no such suggestion or motivation is discernible in the art.

(iii) Combination and Function

All of the bridge plates in the art cited by the Examiner are movable in one way or another. The applicant submits that not only is there no suggestion in the art to combine the bifurcation of Larson with any of the other references, but the whole function of Larson is to a different purpose and direction. Larson seeks not to have a yaw-tolerant, movable connection, like a bridge plate, but rather a locked, load bearing connection by which the weight of one end of a highway trailer can be carried into a purpose built bogie. Larson's slot permits the engagement of a highway trailer kingpin, so that it can be locked in place. It is difficult to see how Larson could be combined with any of the other references without destroying the function of at least one, if not all of them.

Even assuming that a bifurcated toe were chosen, the horizontal hinges of Bell and Thompson do not accommodate yawing motion of the bridge plates. That being the case, the use of a bifurcated toe with a yaw tolerant fitting would seem pointless. Once again, there would be no motivation to combine the references to arrive at the presently claimed invention.

As such, the applicant respectfully submits that the Examiner has not met the requirements for establishing a *prima facie* case of obviousness under 35 USC 103.

5) Obvious to One of Ordinary Skill in the Art

In several instances the Examiner has suggested that modifications are "obvious to one of ordinary skill in the art". The applicant respectfully traverses each and every such instance. As noted in *Re Garratt*, a rejection under 35 USC 103 is not properly made out by an unsupported statement that it is "obvious to one of ordinary skill in the art". The Examiner bears the burden of providing support for such a rejection. In view of the authorities cited above, the Examiner has not provided adequate support either for the statement of what would have been obvious to a person skilled in the art, contrary to the holding in *Garrett*, or to provide suggestion for the combination, as in *Levengood*. As such the applicant respectfully submits that requirements for a rejection under 35 U.S.C. 103 have not been met.

6) Claim Amendments and New Claims

Claims 1 and 2 have been cancelled.

Claim 3 has been amended to emphasise the operability of the bridge plate during train motion, and its ability to disengage the second rail road car, in contradistinction to the art cited by the Examiner, and discussed above.

Claim 5 has been amended to correct the inadvertent insertion of "position" rather than "axis" in the claim as filed.

Claim 6 has been amended to improve sentence structure by adding "and", and to remove the adjective "upper".

The sentence structure of claim 13 has been improved by adding explicit antecedent basis for the first and second ends of the beam. The non-permanent connection nature of the bridge plate attachment fittings has been emphasised by inclusion of the words "one of said first and second fittings being disengageable".

Claim 14 has been amended with regard to motion when the bridge plate is disengaged from the second rail road car.

Claim 20 has been amended to emphasise (a) the tolerance of yaw motion by the first fitting; (b) the tolerance of yaw motion by the second fitting; and (c) the ability to disengage the second fitting.

Claim 24 has been amended to note the removability of the second pivot pin.

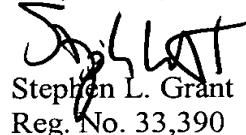
New claims 30 – 32 introduce dependencies for claim 24.

New claim 33 is directed to a bridge plate having flanges and webs consistent with dependent features previously recited. New dependent claims 34 – 46 relate to features of the bridge plate of claim 33.

6) Conclusion

In view of the foregoing arguments and claim amendments the applicant submits that the claims are presently in a condition to permit allowance. Therefore the applicant requests early and favorable disposition of this application.

Respectfully submitted,



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